

Conversational Dynamics: Identifying *When* Employee Language Impacts the Customer

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Short Abstract

While scholars increasingly investigate consumer language, conversational dynamics have received little attention. We introduce a novel methodological approach and apply it to the warmth/competence trade-off. Rather than being warm OR competent, customer service people can enhance consumer perceptions by speaking both affectively and cognitively, but at different times.

Long Abstract

Consumer conversations are dynamic. People chat with each other online (discussion boards, texting, social media) and debate word of mouth opinions in the “real world.” Salespeople try to persuade potential buyers who sometimes push back, while call centre workers talk with customers to help resolve their issues. These important consumer interactions are not monologues, but dynamic dialogues between people.

While conversations are a central feature of consumer life, they can be remarkably difficult to analyze. They entail a messy series of conversational turns with dramatic variation in content and importance. These challenges may be why most prior language research examines texts or speech acts as singular, static events (e.g., Kronrod et al. 2011; Packard, Moore, and McFerran 2018).

But a more granular view may be important. Clearly some parts of conversations may matter more than others, but which parts might those be, and how can researchers identify them? We introduce a novel method allowing researchers to not only examine whether language matters, but *when* it matters. Specifically, when different linguistics features in different parts of conversations play a larger role.

To demonstrate this approach, we explore a test case around what are said to be the two most important dimensions of person perception—warmth and competence (Abele and Wojciszke 2007; Fiske, Cuddy and Glick 2007). It’s difficult to seem both warm and competent. Trying to be more emotionally-concerned impedes perceptions of competence, while acting in a more rational, cognitively-oriented manner makes people seem less warm (the warmth / competence trade off or “self-presenter’s paradox”; Godfrey, Jones and Lord 1986; Holoien and Fiske 2013; Wang et al. 2019). As a result, prior work suggests people should prioritize just one of these two modes in a given social interaction.

However, speaking only warmly or competently may not be ideal. For example, service agents are supposed to show they care, but also that they are thinking through and trying to solve the customer’s problems (e.g., de Ruyter and Wetzels 2000; Parasuraman et al. 1985; Spiro and Weitz 1990).

We suggest that *when* agents speak warmly vs. competently is important. Specifically, more affective language at the beginning of an interaction may be important to build rapport over the customer’s issue. That said, it is also important to turn to a more analytic, cognitive style when trying to competently solve that issue. Finally, given the work on recency or end effects (Greene 1986), closing with affective language may be key to leaving the customer feeling positive about the interaction. Our approach uses dynamic quantitative modeling to test this possibility.

Data. We obtained 200 audio recordings of customer service calls from a large American retailer. As a dependent measure, the firm provided end-of-call perceptions of employee helpfulness (1 = not at all helpful, 4 = very helpful). A transcription company converted the recordings to text. Each conversational turn was treated as a separate record (e.g., turn 1 (agent): “How can I help you?”, turn 2 (customer): “I can’t find (...)”), resulting in 12,410 turns for analysis. The time-series of turns is standardized over all calls (time = 0-1).

For our independent measures, we captured affective versus cognitive language using validated linguistic dictionaries (affective processes, cognitive processes; LIWC; Pennebaker et al. 2015) for both the employee and customer. Controls included customer attributes (e.g., gender, lifetime expenditures), employee attributes (e.g., tenure, quality ratings), customer language, and conversation features (e.g., issue, severity, linguistic synchronicity).

Method. We use methods from functional data analysis (FDA; Ramsay and Silverman 2007) and machine learning (Yang and Zou 2015; Kong et al. 2016) to address the challenges of analyzing conversational language. This integrated approach enables data-driven identification of time-based functions (curves) of conversational features (e.g., language) significantly linked to the outcome of interest (e.g., perception of the other speaker). For any set of conversation feature(s), this method produces sensitivity curves that can deviate over time either positively or negatively from non-significance (zero line) in relation to the outcome of interest.

Results. As shown in Figure 1, results support our theorizing. Areas shaded in blue reveal the importance of more cognitive language in the middle 50% of the call. That said, as shown by the negative effect of cognitive language at the beginning of the call, employees who try to jump straight into using cognitive language at the call’s opening-- perhaps attempting to quickly and competently solve the customer’s problem-- generate significantly negative social perceptions (blue shaded area below the zero line). Instead, as shown by the solid red line and shaded areas in Figure 1, affective language has the most positive effect at the beginning and end of the call.

The average employee’s use of both affective and cognitive language does not follow the optimal functional forms. Instead, as shown by the dashed lines in Figure 1, the agent’s use of affective language is at its lowest point at the start of the call, when it is particularly important, while cognitive language is near its lowest point between 12.5% and 40% into the conversation, which our method reveals is when it offers its most positive impact on social perceptions.

Discussion. This research begins to shed light on a richer theory of conversational dynamics. While a great deal of work has looked at word of mouth in general, *when* different linguistic approaches are most useful in conversation has received little attention.

Our results show that customer service employees should try to be warm and competent, but at different times in the conversation. Further, this is just one example of how this approach can be used to understand conversational dynamics. The same approach could be used to understand other linguistic features thought to be beneficial such as concreteness, asking questions, or using long sentences (Castleberry et al. 1999; de Ruyter and Wetzels 2000; Schellekens et al. 2010) in customer service, or studying word of mouth, negotiation, message recall, or other important marketing subjects.

FIGURE 1

CUSTOMER SERVICE EMPLOYEE’S AFFECTIVE AND COGNITIVE LANGUAGE DYNAMICALLY IMPACT CUSTOMER PERCEPTIONS.

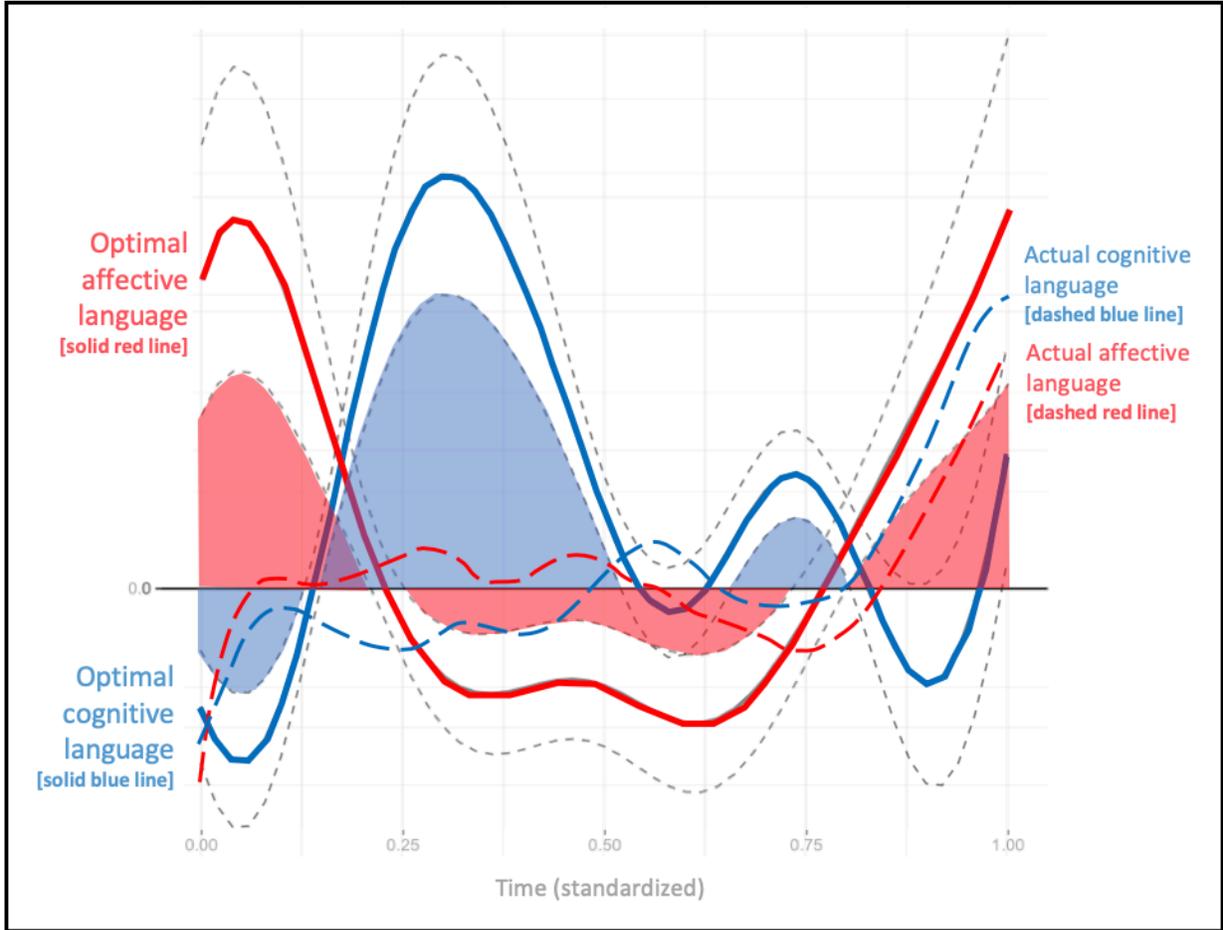


FIGURE 1 NOTES: The solid red (blue) line indicates the optimal temporal function of perceived employee helpfulness predicted by agent affective (cognitive) language. The dashed red (blue) line indicates actual temporal use of affective (cognitive) language. The red (blue) shaded space above the zero line indicates when affective (cognitive) language has a significant positive effect on customer perceptions of agent helpfulness, while red (blue) shaded space below the zero line indicates where that language has a significant negative effect on helpfulness. Distance from zero indicates the size of the respective language effects at a given (normalized) time during the sequence of conversational turns. Grey dotted lines represent 95% confidence intervals around the optimal temporal functions.

REFERENCES

- Abele, Andrea E. and Bogdan Wojciszke (2007), "Agency and Communion from the Perspective of Self Versus Other," *Journal of Personality and Social Psychology*, 93(5), 751-763.
- Castleberry, Stephen B., C. David Shepherd, and Rick Ridnour (1999), "Effective Interpersonal Listening in the Personal Selling Environment: Conceptualization, Measurement, and Nomological Validity," *Journal of Marketing Theory and Practice*, 7(1), 30-38.
- Fiske, Susan T., Amy J. C. Cuddy, and Peter Glick (2007), "Universal Dimensions of Social Cognition: Warmth and Competence," *Trends in Cognitive Sciences*, 11(2), 77-83.
- de Ruyter, Ko and Martin G. M. Wetzels (2000), "The Impact of Perceived Listening in Voice-to-Voice Service Encounters," *Journal of Service Research*, 2(3), 276-284.
- Godfrey, Debra K, Edward E. Jones, Charles G. Lord (1986), "Self-promotion is not Ingratiating," *Journal of Personality and Social Psychology*, 50(1), 106-115.
- Greene, R. L. (1986), "Sources of recency effects in free recall," *Psychological Bulletin*, 99(2), 221-228.
- Halmari, Helena (1993), "Intercultural Business Telephone Conversations: A Case of Finns vs. Anglo-Americans," *Applied Linguistics*, 14(4), 408-430.
- Holoien, Deborah S and Susan T. Fiske (2013), "Don't Blame Positive Impressions: Compensation Between Warmth and Competence in Impression Management," *Journal of Experimental Social Psychology*, 49(1), 33-41.
- Kong, Dehan, Kaijie Xue, Fang Yao, and Hao H. Zhang (2016), "Partially Functional Linear Regression in High Dimensions," *Biometrika*, 103(1), 147-159.
- Kronrod, Ann, Amir Grinstein, and Luc Wathieu (2011), "Enjoy! Hedonic Consumption and Compliance with Assertive Messages," *Journal of Consumer Research*, 39(1), 51-61.
- Packard, Grant, Sarah G. Moore, and Brent McFerran (2018), "(I'm) Happy to Help (You): The Impact of Personal Pronouns Use in Customer-Firm Interactions," *Journal of Marketing Research*, 55(4), 541-555.
- Parasuraman, A., Valarie A. Zeithaml, and Leonard L. Berry (1985), "A Conceptual Model of Service Quality and Its Implications for Future Research," *Journal of Marketing*, 49(4), 41-50.
- Pennebaker, James W., Ryan L. Boyd, Kayla Jordan, and Kate Blackburn (2015), "*The development and psychometric properties of LIWC2015*," Retrieved from https://repositories.lib.utexas.edu/bitstream/handle/2152/31333/LIWC2015_LanguageManual.pdf
- Ramsay, James O. and Bernard W. Silverman (2007), *Applied Functional Data Analysis: Methods and Case Studies*, New York: Springer.
- Schellekens, Gaby A. C., Peeter Verlegh, and Ale Smidts (2010), "Language Abstraction in Word of Mouth," *Journal of Consumer Research*, 37(2), 207-23.
- Spiro, Rosann L. and Barton A. Weitz (1990), "Adaptive Selling: Conceptualization, Measurement, and Nomological Validity," *Journal of Marketing Research*, 27(1), 61-69.
- Wang, Ze, Huifang Mao, Yexin Jessica Li, and Fan Liu (2017), "Smile Big or Not? Effects of Smile Intensity on Perceptions of Warmth and Competence," *Journal of Consumer Research*, 43(5), 787-805.
- Yang, Yi and Hui Zou (2015), "A Fast Unified Algorithm for Solving Group-Lasso Penalized Learning Problems," *Statistics and Computing*, 25, 1129-1141.